



ECOFACT CALENDAR FOR UNDERTAKING ECOLOGICAL SURVEY AND MITIGATIONS

This table has been prepared to provide guidance for undertaking ecological surveys and mitigation works. It is neither definitive nor does it constitute an official document. Species and habitat surveys will be individually affected by climate and weather conditions etc. and this may alter the suitability of survey periods.

Where proposed surveys or mitigations include the disturbance, capture or translocation of protected species or interference with their dwellings, it is likely that a derogation licence will be required from the National Parks and Wildlife Service or the Department of Communications, Energy and Natural Resources. This applies to both terrestrial and aquatic species.

TERRESTRIAL ECOLOGY SURVEY AND MITIGATION CALENDAR

			Month											
Ecological interest		Licence required	J	F	M	A	M	J	J	A	S	O	N	D
Terrestrial ecological interests														
Habitats and flora	Survey		Sub-optimal Phase 1 habitat survey mosses and lichens			Optimal botanical survey, mosses and lichens during early season						Sub-optimal Phase 1 habitat survey. Mosses and lichens		
	Mitigation	✓	Clearance works and planting and translocation mitigations possible		Sub-optimal for planting		No clearance works. Unsuitable for planting or translocation of most species			Clearance works possible. Sub-optimal for planting		Clearance works and planting and translocation mitigations possible		
Birds	Survey		Wintering birds		Wintering birds, passage migrants & breeding birds		Breeding birds				Passage migrants & wintering birds		Wintering birds	
	Mitigation	✓	Clearance of trees and scrub. <i>Note: Avoid impacts to wintering bird habitat.</i>		No clearance of vegetation during bird nesting season						Clearance of trees and scrub <i>Note: Avoid impacts to wintering bird habitat.</i>			
Badgers	Survey		Badger activity / sett surveys			Sub-optimal survey period						Badger activity / sett surveys		
	Mitigation	+	No disturbance of existing setts – artificial sett creation only						Sett closure/destruction				See Jan.	
Bats	Survey	+	Winter hibernation roosts			Optimal activity surveys						Winter hibernation roosts		
	Mitigation	+	Works on maternity roosts		Works on maternity and hibernation roosts		Works on hibernation roosts only			Works on maternity and hibernation roosts		Works on maternity roosts		
Otter	Survey		Activity surveys		Sub-optimal survey period due to riparian vegetation						Activity surveys			
	Mitigation	+	Year round mitigation, but must avoid breeding otter holts											
Pine marten	Survey		Deciduous woodland surveys			Optimal survey period <i>Note: breeding den surveys in early April/May</i>						Deciduous woodland surveys		
	Mitigation	+	Works possible		Avoid all works in pine marten habitat								Works possible	
Whorl snails	Survey	+	Surveys can be carried out year round			Optimal survey period, with dry periods avoided.				Surveys can be carried out year round				
	Mitigation	+ ✓	Habitat creation / riparian planting				Translocations recommended during vegetative growing period				Habitat creation / riparian planting			
Marsh fritillary	Survey	+	Surveys not possible			Adult surveys in the early season / Caterpillar surveys in the late season				Surveys not possible				
	Mitigation	+ ✓	Habitat creation / planting of Devil's Bit Scabious			No impacts to potential adult breeding habitat			Caterpillar translocation		Habitat creation and planting of Devil's Bit Scabious			

Optimal survey period

Sub-optimal survey period

Survey not possible/
not recommended

Optimal mitigation period

Limited mitigation

Mitigation works not possible/
not recommended

+ Licence required from NPWS for handling or interfering with protected species

✓ Licence may be required for interfering with Annex I habitat or Natura 2000 site

FRESHWATER ECOLOGY SURVEY AND MITIGATION CALENDAR

			Month											
Ecological interest		Licence required	J	F	M	A	M	J	J	A	S	O	N	D
Freshwater ecological interests														
River corridor / River Habitat Survey (RHS)	Survey		River Habitat Survey possible			Optimal botanical survey period						River Habitat Survey possible		
	Mitigation	✓	Riparian works possible Note: Avoid instream works during salmonid spawning season				Riparian and instream works possible Note: Avoid lamprey spawning habitat						Riparian works possible Note: Avoid instream works during salmonid spawning season	
Adult salmonids	Survey		A census of upstream migrating adult salmonids can be undertaken throughout the year using fish counters											
		#✓	Redd count	Survey limited to habitat suitability assessments			Licensing period for electrical fishing				Survey limited to habitat suitability assessments		Redd count	
	Mitigation	#✓	Avoid instream works during salmonid spawning season				Instream works possible Note: Avoid lamprey spawning habitat				Avoid instream works during salmonid spawning season			
Juvenile salmonids	Survey	#	Smolt trapping not possible			Smolt census			Smolt trapping not possible		Smolt census	Smolt trapping not possible		
		#	Survey limited to habitat suitability assessments and fish counter data				Licensing period for electrical fishing surveys		Electrical fishing surveys recommended		Survey limited to habitat suitability assessments and fish counter data			
	Mitigation	#✓	Avoid instream works during salmonid spawning season				Instream works possible Note: Avoid lamprey spawning habitat				Avoid instream works during salmonid spawning season			
Lamprey species	Adult lamprey survey	#	Trapping of upstream migrating adult lamprey possible				Visual observation of adult spawning activity and redd counts. No trapping / handling of adult lampreys recommended during this period.				No activity	Trapping of upstream migrating adult lamprey possible		
	Juvenile lamprey survey	#	Lamprey trapping not possible	Trapping of downstream migrating juvenile lamprey				Lamprey trapping not possible				Trapping of downstream migrating juvenile lamprey		
		#	Manual searches for juveniles possible				Electrical fishing for lamprey ammocoetes possible. Note: Avoid lamprey spawning habitat		Electrical fishing for lamprey ammocoetes and transformers recommended			Manual searches for juveniles possible		
	Mitigation	#✓	Instream works possible following translocation of juveniles. Note: Avoid instream works during salmonid spawning season				Lamprey spawning season (sea, river and brook species); no instream works recommended within lamprey spawning habitat				Recommended period for instream works following translocation of juveniles		Instream works possible following translocation of juveniles. Note: Avoid instream works during salmonid spawning season	

Optimal survey period

Sub-optimal survey period

Survey not possible/
not recommended

Optimal mitigation period

Limited mitigation

Mitigation works not possible/
not recommended

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FRESHWATER ECOLOGY SURVEY AND MITIGATION CALENDAR continued

			Month											
Ecological interest		Licence required	J	F	M	A	M	J	J	A	S	O	N	D
Freshwater ecological interests														
Freshwater pearl mussel	Survey	+	Survey possible year round in good sunshine and low flow conditions. Avoid high flows / high turbidity.											
	Mitigation	+ ✓	Avoidance is preferable for this species; instream works, capture or translocation are not recommended											
White-clawed crayfish	Survey	+	Sub-optimal, reduced activity, females with ova			Females with young – sub-optimal survey period.		Optimal survey period			Mating period – no survey		Sub-optimal, reduced activity	
	Mitigation	+ ✓	Low activity, avoid capture/translocation measures		Capture and exclusion measures possible <i>Note: Avoid instream works during salmonid spawning season</i>						Low activity, avoid capture/translocation measures			
Other macroinvertebrates and biological water quality surveys	Survey		Sub-optimal survey period		Optimal survey period						Sub-optimal survey period			
	Mitigation		Instream works will be generally limited by other receptors											
Amphibians	Survey	+	Hibernation, some activity from mid-February	Optimal survey period during breeding, spawning and activity period								Hibernation		
	Mitigation		Hibernation period – avoid instream works. Mitigations limited to habitat creation and management		Trapping of adults, tadpoles and juveniles for removal and/or translocation. Instream works possible						Hibernation period – avoid instream works. Mitigations limited to habitat creation and management			
Macrophytes	Survey		Sub-optimal survey period			Botanical growing season						Sub-optimal survey period		
	Mitigation	✓+	Instream works including habitat creation and translocation possible, but likely to be limited by other receptors.				Instream works possible including seed collection for habitat compensation.				Instream works including habitat creation and translocation possible, but likely to be limited by other receptors.			

Optimal survey period

Sub-optimal survey period

Survey not possible/
not recommended

Optimal mitigation period

Limited mitigation

Mitigation works not possible/
not recommended

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MARINE ECOLOGY SURVEY AND MITIGATION CALENDAR

			Month											
Ecological interest		Licence required	J	F	M	A	M	J	J	A	S	O	N	D
Marine ecological interests														
Algal species	Survey		Sub-optimal survey period				Botanical growing season				Sub-optimal survey period			
	Mitigation	✓#	Mitigation can potentially be carried out in any month											
Epifauna	Survey		Sub-optimal survey period			Optimal activity and survey period					Sub-optimal survey period			
	Mitigation	✓#	Mitigation can potentially be carried out in any month, species specific requirements apply											
Intertidal habitats	Survey		Sub-optimal survey period			Optimal survey period					Sub-optimal survey period			
	Mitigation	✓#	Mitigation can potentially be carried out in any month, species and habitat specific requirements apply											
			Note: Avoid works during winter months at sites containing sensitive wintering birds											
Benthic habitats	Survey		Year round survey period											
	Mitigation	✓#	Mitigation can potentially be carried out in any month, species specific requirements apply											
Seabirds	Survey		Wintering seabirds		Wintering seabirds, passage migrants & breeding seabirds		Breeding seabirds				Passage migrants & wintering seabirds		Wintering seabirds	
	Mitigation	✓#	Mitigation can potentially be carried out in any month, species specific requirements apply regarding wintering / breeding populations											
Marine mammals	Survey	+	Survey for marine mammals may occur year-round taking account of species specific movements / migrations											
	Mitigation	+✓#	Timing of works must consider seasonality with regard to breeding season, nursing of young and territoriality											

Optimal survey period

Sub-optimal survey period

Survey not possible/
not recommended

Optimal mitigation period

Limited mitigation

Mitigation works not possible/
not recommended

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